Amendments to the Specification:

Applicants respectfully note that all paragraph numbers of the specification cited in this Amendment correspond to the paragraph numbers appearing in U.S. Patent Application Publication No. US 2005/0016093 A1 associated with the present application.

Please replace paragraph [0002] with the following amended paragraph:

[0002] Over the past decades, there have been a significant number of terrorists attacks on government buildings owned by the United States and other countries both outside of the United States and within. For example, in 1993, terrorists exploded a car bomb inside the garage of the World Trade Center located in New York City, resulting in loss of life and significant property damage. Since then, in 1995, other extremists exploded a truck outside of the Federal Building located in Oklahoma City, Okla. also resulting in significant loss of life and property damage. In 1998, the United States embassies in Nairobi and Dar Es Salaam were also subject to terrorists attacks by car bombs, each of which resulted in significant loss of life and property damages. More recently, the tragic events at the World Trade Center in New York City and the Pentagon in Virginia has further emphasized the long felt need to develop and manufacture building materials which are able to withstand the shock wave from car bomb explosions and other similar terrorist attacks.

Please replace paragraph [0005] with the following amended paragraph:

[0005] For example, Pittsburgh Corning Corporation ('PCC') of Pittsburgh, Pa. has developed and marketed a product known as Foam Glas® Insulation Systems, which is described in U.S. Pat. Nos. 3,959,541, 4,119,422, 4,198,224, 4,571,321 and 4,623,585. Because the focus of these developments are directed to making a foam insulating material, the Foam Glas® Insulation Systems tile commercially sold by PCC is relatively light, weighing 9.5 lb./cu. ft. Furthermore, since the purpose of this tile is to be used as thermal insulation, it lacks surface strength, and can be dented very easily. Because the Foam Glas® Insulation Systems tile is of relatively low density, e.g., 9.5 lb./cu. ft., such tiles will easily break when ~~exerted~~ exposed to forces typically ~~asserted~~ exerted on exterior walls ~~to~~ of a building or other structure. Thus, such tiles are not suitable to be used as tiling for an exterior wall. Similarly, this foam, when exposed to a shock wave from an explosion will absorb very little of the shock waves energy when it implodes. A shock wave is a measure associated with explosions which is easily understood by those skilled in the art as being a pressure front resulting from an explosion.

Please replace paragraph [0028] with the following amended paragraph:

[0028] FIG. 3B shows a cross-sectional view taken along line 3B-3B of FIG. 3A ~~along the middle of tile 52A~~;

Please replace paragraph [0030] with the following amended paragraph:

[0030] FIG. 4B shows a cross-sectional view taken along line 4B-4B of FIG. 4A ~~along the middle of tiles 62A and 62C~~;

Please replace paragraph [0032] with the following amended paragraph:

[0032] FIG. 5B shows a cross-sectional view taken along line 5B-5B of FIG. 5A ~~along the middle of tiles 72A and 72C~~;

Please replace paragraph [0036] with the following amended paragraph:

[0036] In [[a]] co-pending U.S. patent application Serial No. 10/625,071 ("the '071 Application," published as U.S. Patent Application Publication No. US 2005/0019542 A1), which is owned by the same applicant and was filed on the same day as this application, and the content of which is incorporated by reference herein, a strong, high density foam glass tile having small pore sizes is disclosed which have tension strength ranging from 775 to 2500 lb./sq. in. and compression strength ranging from 2000 to 14,600 lb./sq. in. This previously unattainable strength in foam glass tiles, now makes it possible to apply the technology associated with prestressed concrete to prestressed foam glass tiles. The

present invention is directed at this new and heretofore not possible application. Details on how to manufacture such tiles are disclosed in that application.

Please replace paragraph [0045] with the following amended paragraph:

[0045] Under one embodiment of the present invention shown in FIG. 1, a prestressed assembly 10 is shown. The prestressed assembly 10 is comprised of a prestressed, strong foam glass tile 12, two steel beams 26, two steel pieces 28, and two tension bolts 18 with associated nuts 22 and washers 20. The prestressed, strong foam glass tile 12 is formed in accordance with the teachings of the co-pending U.S. patent application owned by the same applicant discussed above which was filed on the same day as the present application, with strain gauges 14 attached on each of the four sides of foam glass tile 12, and wires 16 coming out of the strain gauges 14 and connected to a strain measuring machine (not shown)~~.~~. In this embodiment, the strain gauges 14 should be placed approximately at the center of the 4 side walls of tile 12. The top and bottom surfaces 32 of tile 12 should be ~~grounded~~ to be smooth and parallel, to avoid uneven application of stress to tile 12. Two steel pieces 28 are placed adjacent to the top and bottom surfaces 32 of tile 12. Two steel beams 26 are in turn placed on the outer surfaces of steel pieces 28. The steel beams may also be replaced with other appropriately strong and stiff building materials. The two steel beams 26 are bolted together by two tension bolts 18 having bolt heads 24 and associated nuts 22 and washers 20, with the steel pieces 28 and foam glass tile 12 in between. Alternatively, instead of using nuts, it may

be deemed desirable to weld or otherwise fasten the tension bolts in a manner known by those skilled in the art. Each of the steel pieces 28 includes beveled edges 30 on the side thereof away from tile 12 and adjacent steel beam 26. When the nuts 22 and bolts 24 are tightened to apply pressure to steel beams 26, the beams 26 will bend. In order to avoid transmitting an unequal stress to the foam glass tiles 12, steel pieces 28 are provided with beveled edges 30 so as to permit steel beam 26 to flex when nuts 22 are tightened and to avoid transmitting the curvature of steel beam 26 to tile 12. Alternatively, the steel beams 26 may be built with appropriate camber so as to avoid the necessity of providing beveled edges 30 on steel pieces 28, and possibly steel pieces 28 altogether. Screws 18 having bolt heads 24 and nuts 22 should be selected to have sufficient strength to apply the required prestressing for the selected foam glass tile 12.

Please replace paragraph [0046] with the following amended paragraph:

[0046] In order to insure that the strain is applied evenly, the strain measured by strain gauges 14 ~~are~~ is monitored. Specifically, the strain gauges 14 on the side walls of tile 12 that are adjacent tension bolts 18 should be monitored to insure that stress is applied equally. For example, the nuts 22 should be tightened while bolt heads 24 are held fixed in a manner so as to maintain the stress gauges 14 approximately even although not necessarily exactly the same. Significantly, until an appropriate tightening protocol is developed for a particular configuration, it is useful to have strain gauges located near each tension bolt to ensure even tightening.

Please replace paragraph [0057] with the following amended paragraph:

[0057] In another embodiment of the present invention shown in FIG. 6, the assembly 80 uses two floors 86A and 86B of a building in addition to steel beams 90/steel pieces 88 to achieve the prestressing. Since the weight of the upper floor 86A can be used to apply compression, the initial tension being applied by tension bolt 84 can be reduced. In FIG. 6, four rows of tiles 82A, 82B, 82C and 82D are shown. However, the number and size of tiles can be modified as discussed above. Further this embodiment can be further modified in accordance with the teachings and principles discussed above with respect to embodiments 10, 10A, 50, 60 and 70.

Please replace paragraph [0059] with the following amended paragraph:

[0059] As set forth in the co-pending ~~U.S. patent application~~ '071 Application, which is incorporated by reference herein as discussed above ~~owned by the same applicant discussed above which was filed on the same day as this application~~, the foam glass tiles in Examples 1-7 of the present application were made by blending the raw materials set forth under Composition in Table 1 below:

Please replace paragraph [0060] with the following amended paragraph:

[0060] In order to make a useful comparison, the weight of the composition was normalized assuming with the total amount of silica plus fly ash equals 100 grams. Thereafter, to insure the proper amount of material is used the normalized composition weight is multiplied by an appropriate batch size factor, as indicated in Table 1, to account for the size of the mold being used. For example, a batch size factor of 50×, has been used for a mold 8 inches × 14 inches × 4 inches.

Please replace paragraph [0062] with the following amended paragraph:

[0062] The characteristics of the resulting foam glass for Examples 1 to 7 herein are indicated in the characteristics portion of Table 1. The resulting foam glass had a density of about 30 and 70 lb./cu. ft., as indicated in the characteristics section of Table 1, and a completely glazed surface. The pore structure was uniform with average pore sizes as indicated in the characteristics section of Table 1. As Table 1 shows, tiles with smaller pore sizes, high density and uniform structures provided have the greatest tensile and compression strength. In order to determine the strength of the samples of foam glass prepared, an effort was made to follow the standard ASTM testing procedures for concrete. However, because the samples proved to be substantially stronger than concrete, the procedures had to be modified by reducing the size of the samples in order for the equipment used to actually break the samples. Thus, foam glass blocks were cut into cylinders between 1.0 and 1.5 inches in diameter and less than 5 inches tall for compression measurements without the glazed surface. As indicated in the

characteristics portion of Table 1, the compression strength of Examples 5-7 herein were over 10,000 lb./sq. in., a factor of over 21/2 times the compression strength of concrete (4,000 lb./sq. in.). Similarly, as indicated in the characteristics portion of Table 1, the tensile strength of Examples 5-7 herein (corresponding to Examples 7-9 of the '071 Application) were over 1250 lb./sq. in., a factor of over 21/2 times the tensile strength of concrete (500 lb./sq. in.). Example 7 herein has a tensile strength of 2500 lb./sq. in., a factor of 5 times the tensile strength of concrete.

Please replace paragraph [0064] with the following amended paragraph:

[0064] One of the tension gauges 14 was removed from a side of the tile 12 which was not covered by a tension bolt. The assembly was then tested for its tension strength by placing the opposite side of tile 12 on two knife edges (i.e., rounded cylinders), with a third knife edge being placed in the top center of the side where the tension gauge 14 was removed. The tension bolts remained on the other two sides of tile 12. A constant rate of displacement was then applied on the top knife edge, and the resulting force was measured. The same type of analysis was also performed on another piece of Example 7 which was 1.58 cm × 4.76 cm surface and the results were compared. FIG. 7 shows a graph of the force as a function of displacement of the three point bending test comparing Example 7 unstressed (see curve 92) and an assembly of the present invention using Example 7 prestressed (see curve 94). The different dimensions of the samples were accounted for by using equation (1) as follows:

$$F_{2,\,rescaled}=F_2(w_1/w_2)(h_1/h_2)^2 \qquad (1)$$